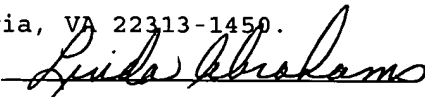


CERTIFICATE OF MAILING BY "EXPRESS MAIL"	
I hereby certify that this paper or fee is being deposited on <u>October 3, 2003</u> with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 as Express Mail Label No. <u>ET371325944US</u> and is addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
<u>10/3/2003</u> Date	 Linda Abrahams

Card Stacking Construction Member and Teaching Aid

BACKGROUND

1. Technical Field

This invention relates to novelty items and games, and more particularly to a construction member for building structures planar cards such as a deck of playing cards.

2. Background Information

Throughout this application, various publications, patents and published patent applications are referred to by an identifying citation. The disclosures of the publications, patents and published patent applications referenced in this application are hereby incorporated by reference into the present disclosure.

Construction games have long been available which include parts that can be assembled to form a structure. Such games are advantageous because they tend to increase manual dexterity, improve hand-eye coordination, and exercise the imagination of an individual. Examples of such games include TINKER TOYS™, LEGO™ blocks, ERECTOR™ sets, and more simply, wooden blocks.

While such games have successfully been utilized for many years, they do not permit the ready, safe assembly of thin panels or sheets of material into walls, buildings and other structures that may be easily disassembled and conveniently stored. The ready

assembly of thin panels of material is advantageous because such panels can be imprinted with a variety of designs and illustrations. A group of cards when assembled in a particular order or pattern can illustrate an animal, a word, a letter, or any other desired object, thing, design, symbol or character. For example, four rectangular cards can each be imprinted with a portion of an object, so that when the cards are placed adjacent one another, e.g., in a co-planar fashion, the printing on the cards collectively forms a completed image. Alternatively, such a word, letter, object, etc. can be illustrated in its entirety on a single panel of material. Another advantage of using thin panels of material to assemble a structure is that thin panels take up a minimal amount of storage space when the structure is disassembled.

One such game for cards is disclosed in U.S. Patent No. 6,015,149 to Burk, entitled Card Stacking Game. This patent discloses a game in which cards can be readily assembled and disassembled from a wide variety of three dimensional structures. The game includes card holders of various configurations which enable the cards to be assembled into a three-dimensional structure. The holders are configured to engage two or more cards, and include a two-piece hinge-like assembly which permits one of the cards to be rotated or pivoted relative to the other(s). While the '149 patent may offer some advantages over the aforementioned art, this construction is not without drawbacks. For example, the various configurations of these card holders, and the two-piece holder construction, makes the game relatively complex, both for the user, and for the game manufacturer/assembler who must fabricate and/or manage inventory for many distinct components.

Accordingly, it would be desirable to provide an improved construction game and teaching tool in which a plurality of uniform, one-piece, construction members may be used to assemble cards into a wide variety of free standing three dimensional structures.

SUMMARY

An aspect of the present invention includes a card construction game and teaching tool for building a structure of cards. The game includes a plurality of cards,

and a card holder having an outermost spherical surface. The card holder includes a plurality of slots disposed in spaced relation along the spherical surface, with the slots being disposed so that the holder is symmetrical about three mutually orthogonal planes. Each of the slots are sized and shaped to receive a portion of one of said cards therein. The slots also include opposing projections configured to releasably engage the card portion disposed within the slot.

In another aspect of the present invention, a card construction game and teaching tool for building a structure of cards includes a card holder having an outermost spherical surface. The card holder includes a plurality of slots disposed in spaced relation along the spherical surface, and is provided with hemispheres defined by any one of three mutually orthogonal planes. Each of the hemispheres include slots spaced equidistantly thereon, so that each of the hemispheres are symmetrical about a central axis thereof. The slots are sized and shaped to receive a portion of at least one of the cards therein, and include at least one projection configured to releasably engage the card portion disposed within the slot.

A further aspect of the invention includes a method for constructing a game and teaching tool. The method includes fabricating a card holder having an outermost spherical surface, placing a plurality of slots in spaced relation along the spherical surface, and spacing the slots equidistantly on hemispheres defined by any one of three mutually orthogonal planes, so that each of the hemispheres is symmetrical about a central axis thereof. The method also includes sizing and shaping each of the slots to receive a portion of one of said cards therein, and providing the slots with at least one projection configured to releasably engage the card portion disposed within the slot.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other features and advantages of this invention will be more readily apparent from a reading of the following detailed description of various aspects

of the invention taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective view of an exemplary three-dimensional structure fabricated using an embodiment of the present invention;

Fig. 2 is an elevational view, on an enlarged scale, of a portion of the structure of Fig. 1;

Fig. 3 is a front elevational view of a card holder of the present invention;

Fig. 4 is a side elevational view of the card holder of Fig. 3;

Fig. 5 is a plan view of the card holder of Figs. 3 and 4;

Fig. 6 is an elevational view of the card holder taken along 6-6 of Fig. 5; and

Fig. 7 is an enlarged view of a portion of the card holder of Fig. 3.

DETAILED DESCRIPTION

In the following detailed description, reference is made to the accompanying drawings that form a part hereof, and in which is shown by way of illustration, specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that other embodiments may be utilized. It is also to be understood that structural, procedural and system changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents. For clarity of exposition, like features shown in the accompanying drawings shall be indicated with like reference numerals and similar features as shown in alternate embodiments in the drawings shall be indicated with similar reference numerals.

Where used in this disclosure, the term “axial” when used in connection with an element described herein, shall refer to a direction relative to the element, which is substantially parallel to its center of rotation a when the element is installed on as shown in Fig. 1. Similarly, the term “transverse” shall refer to a direction substantially

orthogonal to the axial direction. The terms “transverse cross-section” or “transverse circumference” shall refer to a cross-section or circumference, respectively, taken along a plane oriented substantially orthogonally to the axial direction.

Briefly described, embodiments of the present invention include a card holder configured to receive edges of playing cards therein, to enable a user to easily construct a ‘house of cards’ or other geometric shapes. An exemplary card holder includes a small plastic sphere, e.g., approximately the size of a large marble or golf ball, having a plurality of slits disposed in spaced relation thereon. The slits are sized to receive card portions, e.g., corners or edges, in a resilient press-fit engagement, so that the natural bias of the plastic adequately engages and secures the card portions therein, while permitting the card portions to be subsequently removed for disassembly and storage.

Referring now to the figures, specific embodiments of the present invention will be described. As shown in Fig. 1, the present invention includes a game or teaching tool, including a plurality of card holders 10, that enables a user to conveniently build a three-dimensional structure 12 using planar card members 14. Embodiments of card holder 10 are substantially spherical, and as better shown in Fig. 2, have a plurality of slots 16 configured to receivably support a portion of a card 14 therein.

Turning now to Figs. 3-5, hemispheres of holder 10, respectively taken along three mutually orthogonal planes, are shown. Fig. 3 shows a hemisphere taken along the x-z plane, while Figs. 4 and 5 show hemispheres taken along the z-y and y-x planes, respectively. Fig. 6 shows a hemisphere of card holder 10 taken along the x-(z+45 degree) plane. As also shown, several slots 16 are spaced equidistantly along each of these hemispheres, so that the resulting hemispheres are each symmetrical about two orthogonal planes or axes. This symmetry simplifies embodiments of the present invention by enabling a single ‘universal’ card holder to be used to support cards at various angles, e.g., 0, 90, 180, and 270 degrees, to one another. For example, in the embodiment shown, card holder 10 is configured to simultaneously supportably engage up to four cards in a co-planar orientation, in any of three mutually orthogonal planes. Although the embodiments shown and described include a predetermined number and

arrangement of slots 16, the skilled artisan should recognize that substantially any number and arrangement of slots may be provided on the spherical surface without departing from the spirit and scope of the present invention.

Advantageously, this ability enables a user to assemble cards into a wide variety of free standing three dimensional structures, nominally without the need for additional holder types. This, in turn, tends to simplify the use of these embodiments for the user, and also tends to reduce manufacturing and inventory costs for the game manufacturer and or packager/assembler.

Turning now to Fig. 7, in particular embodiments, slots 16 may include opposing projections 18 configured to releasably engage the card portion disposed within the slot. In particularly desired embodiments, projections 18 are fabricated from a resilient material that may be deflected against its natural bias by the card 14 as it is inserted into slot 16. The bias serves to provide the press-fit engagement described hereinabove, to secure the card therein, while permitting the user to easily remove the card for subsequent disassembly, as also discussed hereinabove.

As shown, opposing projections 18 may be disposed directly opposite one another. Alternatively, the opposing projections may be offset from one another as shown in phantom.

As discussed hereinabove, projections 18 may be fabricated from a polymeric material. In particular embodiments, the entire card holder 10, including projections 18, is fabricated from a polymeric material, such as PVC or ABS, as a one-piece, or unitary, device. For example, card holder 10 may be conveniently molded, such as by employing conventional injection molding equipment. It is contemplated that the holder 10 may be molded in one piece, or alternatively, two hemispherical portions may be individually molded, and then bonded to one another about their equators. Alternatively, holder 10 may be machined from a piece of solid stock.

Moreover, the holder may be fabricated as a substantially solid device, or alternatively, may be substantially hollow. The skilled artisan will recognize that the choice of solid or hollow may be dictated in large part by the material and manufacturing technique being used.

Having described embodiments of the present invention, a description of an exemplary method of fabrication of card holder 10 is shown in Table 1.

TABLE 1

20	Providing card holder material with spherical surface;
22	Disposing slots along the spherical surface;
24	Spacing the slots equidistantly on hemispheres;
26	Configuring each of the hemispheres to be symmetrical about two orthogonal planes;
28	Configuring the slots to receive a card therein;
30	Providing the slots with opposing projections.

As shown, card holder stock, such as a plastic substrate, or plastic stock, is provided 20 or otherwise formed into a spherical surface. A plurality of slots 16 are disposed 22 in spaced relation along the spherical surface. The slots may be provided in any suitable manner, such as by machining into the spherical surface, or by molding them into the surface as the surface itself is molded. The slots are also spaced 24 equidistantly on hemispheres defined by any one of three mutually orthogonal planes. In addition, each of the hemispheres are configured 26 to be symmetrical about at least two orthogonal planes. The slots are configured 28 to receive a portion of one of said cards therein, and are provided 30 with opposing projections 18. The foregoing steps may be performed in any order, as desired depending on the fabrication method used. Moreover, two or more of these steps may be combined and/or executed simultaneously without departing from the spirit and scope of the present invention.

Embodiments of the present invention may thus include an assembly or kit including a plurality of card holders 10, with a set of cards 14 suitable for use therewith. Alternatively, card holders 10 may be sized and shaped for use with conventional playing cards, and thus the holders 10 may be packaged and sold separately, with the expectation that the user may provide their own cards. Regardless of whether or not cards are sold with the card holders, these embodiments advantageously serve as a game and tool for teaching rudimentary construction concepts to children, while improving fine motor skills and eye-hand coordination. These embodiments may also serve as a novelty item or desktop curiosity for adults.

Although slots 16 are shown and described having a plurality of opposed projections 18, the skilled artisan should recognize that the slots may be provided without any projections, or with only a single projection, without departing from the spirit and scope of the present invention.

In the preceding specification, the invention has been described with reference to specific exemplary embodiments thereof. It will be evident that various modifications and changes may be made thereunto without departing from the broader spirit and scope of the invention as set forth in the claims that follow. The specification and drawings are accordingly to be regarded in an illustrative rather than restrictive sense.

Having thus described the invention, what is claimed is: